

In the Claims:

1. (Currently Amended) A bidirectional line switched ring network in a synchronous optical network (SONET) comprising:

a plurality of optical transmission equipment sets connected in a ring form via high speed bidirectional channels of a synchronous transport signal (STS) level,

wherein lower order channels of a virtual tributary (VT) level are mapped on the high speed bidirectional channels,

optical transmission equipment provided in a node on the transmission side performs transmission to each lower-order channel by attaching a transmission-side node ID, and,

optical transmission equipment provided in a node on the reception side collates the received transmission-side node ID, which is transmitted using a V3 byte of a virtual tributary (VT) super frame on which each of the lower-order channels of the VT level is mapped, with an expected value of the transmission-side node ID having been set in advance, and when the collation does not match, the optical transmission equipment in the node on the reception side prevents a misconnection in the event of a failure by inserting an alarm indication signal,

wherein, using the V3 bytes for three frames, in addition to the transmission-side node ID, ~~and a channel ID~~ is additionally transmitted to each ~~VT~~ lower-order channel, so that the time slot interchange (TSI) of the ~~VT~~ lower-order channel is enabled in a pass-through node.

2-4. (Cancelled)

5. (Currently Amended) The bidirectional line switched ring network according to claim 1, wherein, using the first to sixth bits of a H4 byte of the virtual tributary (VT) super frame as flag bits to expand a channel ID, the time slot interchange (TSI) is enabled in the pass-through node.

6. (Currently Amended) The bidirectional line switched ring network according to claim 1, wherein the transmission-side node ID is transmitted using a V4 byte of the virtual tributary (VT) super frame, in place of the V3 byte.

7. (Currently Amended) A bidirectional line switched ring network in a synchronous optical network (SONET) comprising:

a plurality of optical transmission equipment sets connected in a ring form,

wherein optical transmission equipment provided in a node on the transmission side performs transmission to each higher-order channel by attaching a transmission-side node ID, and,

optical transmission equipment provided in a node on the reception side collates the received transmission-side node ID, which is transmitted using a H3 byte of a synchronous transport signal (STS), with an expected value of the transmission-side node ID having been set in advance, and when the collation does not match, the optical transmission equipment in the node on the reception side prevents a misconnection in the event of a failure by inserting an alarm indication signal,

wherein, using the H3 bytes for three frames, in addition to the transmission-side node ID₁ ~~and a channel ID~~ are ~~is~~ additionally transmitted to each STS channel, so that the time slot interchange (TSI) of the STS channel is enabled in a pass-through node.

8-9 (Cancelled)

10. (Currently Amended) A bidirectional line switched ring network comprising:

two bidirectional line switched ring networks each comprising a plurality of optical transmission equipment sets connected in a ring form, being interconnected with lower-order channels including a work channel and a protection channel,

wherein, in regard to two nodes provided in each of the two bidirectional line switched ring networks, one node being connected to the lower-order work channel while the other node being connected to the lower-order protection channel, as an expected source node ~~ID-IDs~~ to be transmitted from a source node to the lower-order work channel, ~~either~~ an ID of a source node transmitting to the own node, ~~or~~ and an ID of a source node transmitting to the node connected to the lower-order protection channel, ~~is~~ are set, and

wherein the two expected source node IDs are collated with the received node ID, and when the received node ID does not match with any of the two expected source node IDs, optical transmission equipment in the node on the reception side prevents a misconnection in the event of a failure by inserting an alarm indication signal.